

Assignment -4

Assignment Date	19 October 2022
Student Name	B AKSHA VARSHINI
Team ID	PNT2022TMID05906
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

Question-1:

Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.

Solution:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization = “fkxdqs”

#define deviceType = “Arduino”

#define deviceId = “1200”

#define authMethod = “use-token-auth”

#define authToken = “00000000”

void setup() {

  Serial.begin(9600);

  pinMode(TRIG_PIN, OUTPUT);

  pinMode(ECHO_PIN, INPUT);

}

float readDistanceCM() {

  digitalWrite(TRIG_PIN, LOW);

  delayMicroseconds(2);

  digitalWrite(TRIG_PIN, HIGH);

  delayMicroseconds(10);

  digitalWrite(TRIG_PIN, LOW);

  int duration = pulseIn(ECHO_PIN, HIGH);

  return duration * 0.034 / 2;
```

```
}
```

```
void loop() {
```

```
    float distance = readDistanceCM();
```

```
    if(distance <= 100)
```

```
    {
```

```
        Serial.println("person detected ");
```

```
    }
```

```
    else{
```

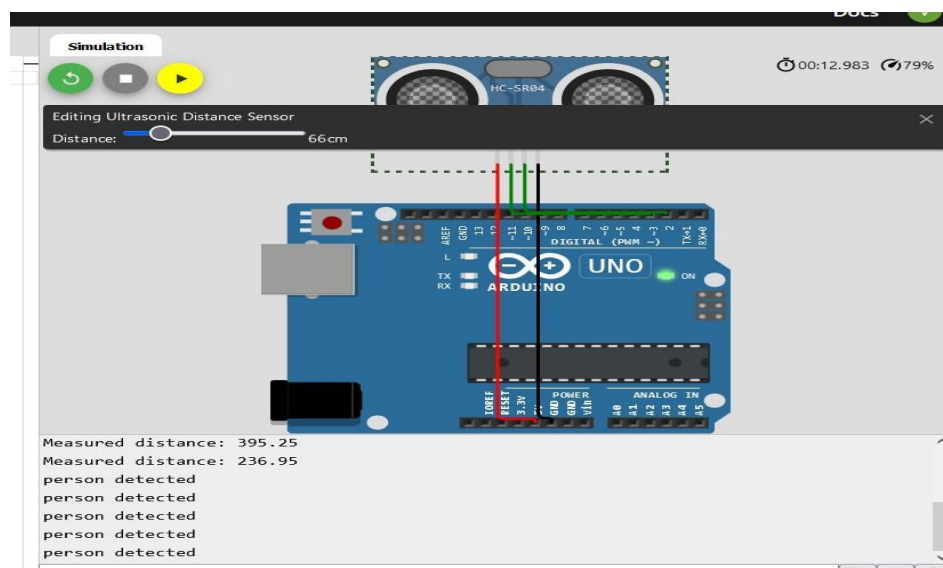
```
        Serial.print("Measured distance: ");
```

```
        Serial.println(readDistanceCM());
```

```
    }
```

```
    delay(1000);
```

```
}
```



Wokwi Link: <https://wokwi.com/projects/346567349532361298>

IBM Cloud

Device Recent Events

The screenshot displays the IBM Watson IoT Platform interface. At the top, the breadcrumb navigation shows 'Devices' > 'Browse'. The main content area has a header with 'Browse', 'Action', 'Device Types', and 'Interfaces'. Below this is a search bar labeled 'Search by Device ID' and a 'Device Simulator' toggle. A table lists devices, with the first device '1200' selected. The device's status is 'Disconnected'. An expanded details panel for device '1200' shows the following information:

Identity	Device Information	Recent Events	State	Logs
Device ID	1200			
Device Type	Arduino			
Date Added	Oct 26, 2022 1:10 PM			
Added By	820419205065@smartinternz.com			
Connection Status	Disconnected			

At the bottom of the details panel, it indicates '1 of 1 page' and '1 - 1 of 1 item'.

← → ↺

https://floxids.internetofthings.ibmcloud.com/dashboard/devices/browse

☆ ↕

IBM Watson IoT Platform

820419205065@smartinernz.com
ID: floxids

?

101

U

Browse

Action

Device Types

Interfaces

Search by Device ID

Device Simulator

Add Device

☐

Device ID

Status

Device Type

Class ID

Date Added

Descriptive Location

Added By

▼

■

1200

Disconnected

Arduino

Device

Oct 26, 2022 1:10 PM

820419205065@smartinernz.com

→ ...

Identity

Device Information

Recent Events

State

Logs

✕

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago

1 Simulation running